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On the

up?

Is it just me or are pick & carry cranes - in all shapes and sizes - making something of a come-back, both in Europe and North America? Certainly in the UK and Ireland the number of manufacturers vying for the market has grown in recent years. This is particularly true for the smaller capacity two tonne compact lifts - possibly in response to the Manual Handling regulations and the growing employee claim compensation culture?

Whatever the reason, the range of products is becoming increasingly wide and diverse. From a manufacturing point of view, Britain, once dominant, through Jones, Coles, Neal and others has no surviving manufacturers, while Germany in the shape of Demag and Liebherr have long abandoned the sector. The USA is hanging in Grove/Shuttlelift and Broderson carry deck units, while Australia's Franna - now Terex - continues to thrive with its unique articulated models. Meanwhile in Italy it's a different story entirely with the big players still fighting it out and joined by a number of new entrants who appear to be doing very well.

Italian manufacturers now dominate the pick & carry sector, at least in Europe. Companies such as Valla and Ormig have been producing and exporting pick and carry cranes for decades however over the past few years they have been joined by several others - including Galizia, JMG, Gruniverpal and Jekko - which compete both at home and increasingly in export markets. The compact, industrial-type cranes they build - increasingly electric powered - are now a familiar sight but totally different to the cranes produced in the UK between the 1950s and 1980s or for that matter with the American and Australian offerings. If the refurbishment of Mammoet's Jones Iron Fairy by Crowland Cranes (see page 32) is anything to go by,



Valla 20 TRX



The last Iron Fairy - the Grove AP415

there is still demand for and life in the older 10 to 15 tonne, compact 4x4, road-going pick & carry cranes which are still unrivalled for certain tasks.

A new Fairy?

To some extent, the American pick & carry cranes - particularly the Grove Yardboss/Shuttlelift Carrydeck and Broderson - as well as the Terex Franna go some way to offering a viable alternative to the Iron Fairy particularly as these cranes are capable of being driven reasonably long distances either on the road between sites or when covering the long distances found on larger facilities. Being diesel powered has its advantages if this is what you are looking for - battery powered units and long travel distances do not blend well - at least not yet. The Italian manufacturers tend either to go for the pure rear-steer industrial units that are not well suited to road travel or jump to

Rough Terrain cranes, missing out on the 10 to 20 tonne Iron Fairy equivalent. Perhaps this is one area that may make a come back?

Costs too high

However one of the main problems holding back the growth of the pick & carry crane - particularly in the UK - is their relatively high purchase cost and specialist nature. The UK equipment sector is heavily based on the rental model and with few manufacturing facilities having enough demand to keep a dedicated crane busy, the rental concept would appear to fit. However both the Italian and American pick & carry cranes are too specialist for most general crane rental companies especially given their cost. That is where the old Iron Fairy scored. Like the Franna it was a good industrial pick & carry crane with tight turning and low headroom capability, but also versatile enough to be used for regular local work



Grove YardBoss YB5518

thanks to its decent road travel ability.

So why have the Franna cranes not taken off in the UK as replacements for the old Fairies? This is hard to answer but size is probably a factor. Even the smallest 15 tonne model is getting on for 9.3 metres overall length, with a width of over 2.4 metres and possibly the crunch factor - more than three metres of boom overhang. In contrast the last Iron Fairy type crane to be built - the Coles designed Grove AP415 - had an overall length of just over seven metres with its two metres of boom overhang carried over the back.

Bringing on the specialists

Several specialist rental companies do now offer a wide range of rental machines. Hull-based Peter Hird & Sons - the Valla distributor for the UK - has the largest fleet of two tonne and larger Valla pick & carry cranes in Europe, available for both short term rental and contract hire. Galizia distributor GGR also offers a full range of machines for both rental and sale. With end-user sales slow, distributors recognise that with this type of equipment, a successful rental can often lead to an eventual sale. With their regional bases and transport requirements, what these companies cannot offer is the sort of affordable daily rate that was offered when every crane company had an Iron Fairy in its yard.

There is a school of thought that if price was significantly reduced then more would be sold. However it is debateable how many of the jobs can be carried out with the compact 'City type' All Terrains, which are also star performers on construction sites and thus more versatile. The big question is, would buyers line up to order a 15 to 20 tonne pick & carry crane that was good on the road - at least over shorter distances - and that could also handle site conditions? The answer probably brings us back to another product that the crane rental industry has apparently longed for over many years - a smaller Japanese type City AT! So are manufacturers like Kato and Tadano missing a trick here? This one almost certainly comes down to what will it cost?

Latest developments

While the basic design of Italian style pick & carry cranes has changed little over the past 50

years, it has certainly not stood still. Most of the recent developments however relate to evolutionary improvements in performance, comfort and more efficient production rather than new concepts. When we took our last in depth look at the sector a year ago, we also looked at alternatives such as the Versa-Lift machines made by Custom Mobile Equipment based of Kansas, USA. While these resemble fork lifts on steroids rather than a crane, they have found a real international niche lifting and moving very heavy industrial equipment. Versa-Lift's largest truck - the 100/140 - can lift 45.4 tonnes without extending its frame/ballast and has a maximum extended capacity of 63.5 tonnes. It has two all-electric powered versions - the 25/35E and the 40/60E - one was unveiled to the European market earlier in the year in Holland. Remote controlled versions are also available.



Versa-Lift 20/35

Currently there is a renewed interest in the modern, compact, pedestrian-operated two tonne capacity products first introduced by Valla. However the time it took the company develop and grow to satisfy the growing demand has meant that other manufacturers - such as Jekko and Galizia - have since entered the market with excellent versions of their own and a number of improvements.

Multi-purpose crane

One of the more interesting introductions in recent years has been a multi-purpose crane from Galizia. The new Multis 636 is a combination of a pick & carry crane, telehandler and work platform. The all-new product is able to lift six tonnes on its main hook or 3.5 tonnes on its fork or bucket attachments making this a real multifunctional machine. However it is the Multis' low overall height and low boom pivot point that really makes it different from other cranes. In telehandler mode the low boom pivot point means that it can easily load right to the back of small vans.



Valla 20 D TRX



The Multis 636 loading vans



Galizia Multis 636.

At 3.3 metres long and 1.73 metres wide the unit is also compact and has an exceptionally small turning circle - possibly as good as a three wheel crane - with true 90 degree crank angle steering on the rear axle. Drive is direct via twin AC electric motors on the front axle that can also counter rotate to help improve the crane's turning circle and reduce stress build-up during sharp turns. A separate AC motor is used to drive the crane hydraulics.

The telehandler tool bar can take a wide variety of attachments including forks, forks with side-shift, buckets, integrated platform, winch,



Galizia GF60 90° rear steering

Galizia GF60.



searcher hooks and jibs etc.

Since then, Galizia has used the Multis 636 as a basis to launch its six tonne GF60. The GF60 combines the advantages of the Multis 636 but in a dedicated crane format which has a longer three section boom and almost eight metres tip height - about two metres higher than the Multis 636. At its maximum horizontal reach of 5.5 metres the GF60 can lift 900kg. Overall height is just over two metres, weight is 6.2 tonnes and width is 1.73 metres.

JMG MC60 v Galizia GF60

Just prior to the GF60, the relatively new Italian manufacturer JMG launched its six tonne capacity battery powered MC 60. The new model came just a few months after the launch of its 11 tonne MC110 model and is, says JMG, just one more step towards completing a range of battery electric cranes that extends from two to 60 tonnes.



JMG MC60



A pair of Valla 120E's lifting process equipment



JMG has a range of battery operated cranes from 2-60 tonnes



Gruniverpal GIA 3000

The MC60 can handle its 6,000kg maximum capacity half a metre out from the crane's front bumper. It boasts a four section, full power telescopic boom which provides an 8.8 metre lift height and up to 5.5 metres of horizontal outreach. The crane is compact measuring 3.2 metres long, 1.65 metres wide, 1.86 metres high and weighing 6,500kg. The drive system is taken from its bigger brother - the 7.5 tonne MC75 - using twin front drive motors and a full 90 degree crank angle steering axle at the rear for a turning radius of just 2.8 metres.

Comparing the JMG MC60 and Galizia GF60 side by side, the Galizia is marginally bulkier in terms of width, height and overall length, but achieves a similar turning circle with a traditional axle and Akerman steering - offering more side stability than the more typical three wheel pick and carry crane configuration.



JMG MC300

Its maximum lift height is a metre lower than the JMG however it does offer the same maximum reach at 5.5 metres and may have a little more capacity at full reach, thanks to its longer wheelbase.

The Galizia has a simpler three section rather than four section boom - which may appeal to some buyers - as well as more powerful drive motors and a little more battery power. The cab can also be removed to lower the overall height to just 1.65 metres. Whichever appeals, it is good to see two excellent new additions to this sector.

New Valla 12 tonner

Another recent battery powered crane - the 120EVO - was launched by Valla last December. While the name EVO suggests that this is an evolutionary model the new 12 tonner is in fact more a giant step forward comparing the new with the old. The new crane is more compact, lighter in weight and has a lower centre of gravity. It has a longer, more sophisticated boom, more efficient drive system and far better styling. It has an overall width of 1.9 metres - 200mm less than the older 120E - an overall height of two metres and is 300mm shorter at

four metres.

The 120EVO also has a longer, full-power five section synchronised boom, with a lifting capacity of 1.7 tonnes at its 13.5 metre maximum tip height. Capacity at its 9.5 metres horizontal reach is one tonne. Features include an internal winch option rather than the boom mounted hoist of the 120E and when the boom is fully retracted and stowed, the hook almost touches the ground thanks to its steep negative boom angle. The 120 Evo has front wheel direct AC electric drive and rear wheel steer with a crank angle of 85 degrees, providing an exceptionally tight turning radius, making it ideal for operating in confined areas.

Another Italian manufacturer....

Those that managed to visit this year's Vertical Days will have seen several pick and carry cranes including a refurbished Iron Fairy carried out by Crowland Cranes, a Broderson IC 200, Ormig 5.5tmE and several offerings from Turin, Italy-based Gruniverpal Tranchero. Distributed by HTS Direct, Gruniverpal is perhaps the least known Italian manufacturer in the UK. In its home country Gruniverpal has



Gruniverpal MiniDrel 125B

been producing lifting equipment with capacities ranging from 80kg to 200 tonnes for more than 60 years. With four different equipment ranges - designed, developed and manufactured in-house - they cover a variety of indoor and outdoor applications and include pick & carry cranes offering up to 25 tonnes capacity with fixed or rotating boom, mould and die handling lifts with capacities up to 200kg, special custom equipment, built to customers' requirements and aerial platforms up to 40 metres. The company claims that certain features such as the double arm, double pivot boom, makes its cranes smaller for a given capacity than its competitors. All models are

also available with 180 degree boom rotation, full width seats allowing control from either side, 4x4 drive for outside use and wireless remote controls.

Its range of mobile cranes is made up of three ranges - the Minidrel B, GIA and GB. The Minidrel B series has lifting capacities from five to 25 tonnes and has a patented 'kinematic system' which it says eliminates load oscillation allowing greater load capacity. The GIA four model series have capacities from 1,250kg to 3,000kg and are walk behind, rear steered lifting devices weighing less than 1,800kg but with lift heights up to seven metres and a horizontal reach of just less than five metres.

The compact GB range has capacities up to 700kg and is used for handling in very restricted areas.



Broderson IC-200

Measuring 1400mm by 800mm the units can slew the boom to both left and right by 150 degrees, have up to two metre boom extension (lifting 400kg), battery power supply and a wide range of accessories.

Broderson

From its headquarters in the Kansas City suburbs, Broderson has been designing, manufacturing and marketing industrial and RT cranes for more than thirty-five years. In the UK the marque is available from Cranes UK the Tadano Faun distributor. Cranes UK sales director Brian Crisp says that "Broderson was chosen because it resembles very much the Tadano Faun philosophy for quality, reliability and simplicity" and that the company had already had a good experience with the products in South Africa." It was a tough time (economically) to starting selling the pick and carry cranes in 2009 and sales not only in the UK but Europe have been slow. However these should pick up given

the seven model line-up with lift capacities from 1.8 to 16.3 tonnes.

The models from the 3.6 tonne IC-35 and larger have the added benefit of 360 degrees rotation and a large carry deck which in the case of its largest crane - the IC-250 - can carry 7.7 tonnes.

Cranes UK has recently supplied two cranes for use in a UK power station. The units include the eight tonne IC-80 and the 16.3 tonne IC-250 which has been found to be an excellent replacement for the Jones 15 tonne Iron Fairy - the operator especially liking the Broderson's low all-weather cab for easy access and excellent all-round vision.

"Broderson together with Cranes UK are continuing to update the models for specific customer requirements

as well as the latest European regulations," said Crisp. "The new units are fully CE marked and adhere to EN 13000, showing the American manufacturers commitment to Europe!"

Speedy Ormig

Yet despite all these models and manufacturers it can still be difficult finding the right crane for a contract. A Speedy Services customer in Scotland required a crane with a specific footprint which proved more difficult than first imagined. The crane which eventually fitted the bill was a 10 tonne capacity Ormig, delivered by UK distributor Crowland Cranes direct to the engineering customer in Scotland.

"We found one in America, but unfortunately it didn't meet EEC standards," said Davey Walker, Speedy's area manager. "Once we'd found it, we had to prove to the customer that it could do the job within the specific footprint."

Walker arranged for the Helensburgh

Broderson IC-80



customer to trial a crane over the Christmas period but by the time it was confirmed that it was exactly as wanted the race was on to get the brand new crane on site by March 31. Crowland Cranes managing director Peter Issitt travelled to Italy and picked up the crane on his low loader and then

drove up to Scotland, delivered it and picked up the trial crane and brought it back. Speedy also carried out a full operator and engineer familiarisation training for a team of more than 20 operators. The whole process, from the first inquiry to the completion of training took five months.



Speedy also has this Ormig 5,5 tME on trial

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One solitary two tonne capacity Galizia G20 installed all the 22,000 sq metres of glass panels on Germany's fourth tallest building - Tower 185 in Frankfurt. The two tonne capacity Galizia was supplied by German dealer Baumo Kranservice and fitted with the GM 500 special suction system. Over

The Galizia G20 installed all 22,000 sq m of glass panels

the 14 month contract it installed all the external glazing on the 50 floor, 200 metre high tower.

Bernd Schubert, owner of Baumo Kranservice, said that the customer - the FKN Gruppe in Neuenstein - was so impressed by the quality and quantity of the work carried out by the G20 that the same G20,

together with a second is working on another large project in Warsaw, Poland.

FKN Gruppe has already ordered two more G20 units that will be delivered by the end of this year to work installing glass panels on large office towers in Munich and Bonn.

Tower 185 is Germany's fourth tallest building

Just like new

Back in the day when the UK had a crane manufacturing industry, the pick & carry crane was a very common sight. Unfortunately all the famous names are long gone however there are still many products that not only survive but are still in daily use. One of the more common is the Jones Iron Fairy. In spite of all the crane developments over the past 30 odd years, no manufacturer has managed to come up with a modern equivalent ie a compact, road-going 4x2 or 4x4 crane with a decent speed, a capacity of around 10 - 15 tonnes with good lift height and pick & carry capability.

Because of this, there are many still operating in crane rental fleets and in yards all over the UK. Of course, even the latest models are now more than 20 years old and many have reached the stage of having had at least one major rebuild to ensure the crane is road worthy and in full working condition. Even if you have an old Iron Fairy or similarly aged crane, the next problem is finding a company that is able to carry out a full refurbishment from start to finish and cope with anything it might find.

Mammoet - which operates one of the world's largest crane fleets - needed such a company to refurbish its 1989, 15 tonne, three section boom Fairy 15A. The company contracted Peterborough-based Crowland Cranes, as one of the few companies operating

in the UK today capable of completing a full 'one stop' no problem too great refurbishment.

Crowland's instructions were quite specific because as with all rebuilds, everything and anything is possible as long as 'money is no object'.

"During the refurbishment we maintained constant contact with Mammoet, discussing the general condition of components found during the total strip down and rebuild. Decisions were made as to replace or not if deemed serviceable," said Crowland's managing director Peter Issitt. "The crane needed major work carrying out including repairs to the power train - engine, transmission, steering and brakes - as well as various oil leaks which are common on this type and age of crane. All were rectified as well as overhauling the slew box and replacing or repairing the hydraulic, pneumatic and electrical systems, renewing decking panels, installing a new operator cab, shot blasting the chassis and carrying out a full repaint including vinyl livery. And all within the quoted time scale and budget."

The crane shown at the recent Vertikal Days, received many positive comments. "Some were even fooled into thinking we were promoting a new replacement product," said Issitt. "The general consensus was that if carried out correctly, there is still a strong market for rebuilding/refurbishing cranes, especially in today's financial climate."



The Fairy 15A needed a total strip down and rebuild



Refurb completed with full repaint including vinyl livery

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